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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,306	07/30/2003	Jeffery S. Blackburn	5702-01043	1883

7590 09/07/2005

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EXAMINER

ILAN, RUTH

ART UNIT PAPER NUMBER

3616

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,306

Applicant(s)

BLACKBURN, JEFFERY S.

Examiner

Ruth Ilan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3 and 7-13 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Prosecution on the merits of this application is reopened on claims 23, and 7-13 considered unpatentable for the reasons indicated below:

Regarding claims 10, 12 and 13 see the below rejection. The Examiner regrets that these claims were inadvertently missed during the Examiner's amendment of 3/22/05.

2. Regarding claims 2 and those claims that depend from it with the exception of 4-6, upon further consideration of the prior art, it appears that these claims are not allowable for the reasons discussed below.

3. The indicated allowability of claim 8 is withdrawn in view of the newly discovered reference(s) to Halford et al.. Rejections based on the newly cited reference(s) follow. In summary, as a result of the examiner's amendment of 3/22/05, claim 1 was cancelled. Claims 2-13 are pending. An action on the merits follows below.

Claim Objections

4. Claim 10 is objected to because of the following informalities: In claim 10, line 3 "step"-should be "steps". Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 8, line 12 recites "an interference fit". Claim 2, as amended, already recites an interference fit. This double inclusion is such that it is not clear if the interference fit recited in claim 8 is an additional interference fit or the one previously recited.

Claim Rejections - 35 USC § 102

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 10 is rejected under 35 U.S.C. 102(b) as being anticipated by Schmucker et al. (US 5,525,306.) Schmucker et al. teaches a gas generator including a housing with a base (4) and a cap (5) that are rotatably and adhesively secured (see col. 3, lines 18 and 55.) Regarding the limitation "to form an interference fit", Schmucker et al. disclosed an interference fit in a number of locations. First of all, the claim doesn't recite any limitations of the interference fit other than that it is formed by rotatably fixing the base against the cap. In Schmucker et al., there is an interference fit between the upper end of the base 4, (as oriented in the Figure) and seal 20 (col.2, lines 47-52.) This is sufficient to meet the limitation. Secondly, Schmucker discloses that the threads may be self-cutting (col. 2, lines 54-56.) In order for the threads to be self-cutting there must inherently be an interference fit between the crest of one thread and the mating element, so that the crest cuts into the mating element. Thirdly, Schmucker discloses

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(col. 2, line 5-54) that the threads may firmly interlock (non-detachable thread connection) which would inherently require or include an interference fit between the threads.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmucker et al. (US 5,525,306) in view of Hill (US 4,590,041.) Schmucker is discussed above, and further teaches an annulus (at 29) formed centrally and disposed radially in the cap and an igniter within the annulus. Schmucker fails to teach that the igniter is adhesively fixed within the annulus. Hill teaches adhesively fixing an igniter within the annulus (col. 3, line 55) in order to provide a seal. It would have been obvious to one having ordinary skill in the art at the time of the invention to include an adhesive fixing the igniter of Schmucker et al., as taught by Hill, in order to provide a seal for the joint between the igniter and the cap.

11. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmucker et al. (US 5,525,306) in view of Bornheim et al. (US 6,655,289 B1.) Schmucker et al. is discussed above, and teaches all elements of the claimed invention, but does not disclose a bar code. Bornheim et al. teaches (col. 5, lines 38-45) that it is useful to include a bar code on an initiation device housing in order to have a convenient place for relevant data. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the housing of Schmucker et al. to

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include a bar code, as taught by Bornheim et al. in order to have a convenient location for relevant data.

12. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernau et al. (US 5,753,852.) Bernau et al. teaches a gas generator including a housing with a base (3) and a cap (2) that are rotatably secured (see col. 2, lines 42-44, and Figure 2A.) The cap includes a peripheral edge (shown with seal element 32 on top of it in Figure 2A) including protruding portions (portion of 11 on top of indent 11e) and the base includes hook members (11d). Bernau et al. does not show the details or other views of the bayonet connection, and as such does not specifically disclose that there are a plurality of these corresponding protrusions and hooks spaced about the cap and base. The Examiner takes Official Notice that it is known in the art that rotary bayonet connections include a plurality of such corresponding elements, and that along with the protrusions are corresponding recessed portions and that the connection works by aligning the hooks with the recessed portions, and then turning until the protrusions have been slidably engaged with the hooks. It would have been obvious to one having ordinary skill in the art at the time of the invention that the connection of Bernau et al. would have included a plurality of such elements, in order provide a locking connection. Regarding the limitation "thereby forming an interference fit", the seal (32) is deformed (see for instance, col. 4, line 41) and as such forms an interference fit between the seal and the housing.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernau et al. (US 5,753,852) in view of Hill (US 4,590,041.) Bernau et al. is discussed above, and

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further teaches an annulus (at 38, bottom of 6, see Figure 1) formed centrally and disposed radially in the cap and an igniter within the annulus. Bernau fails to teach that the igniter is adhesively fixed within the annulus. Hill teaches adhesively fixing an igniter within the annulus (col. 3, line 55) in order to provide a seal. It would have been obvious to one having ordinary skill in the art at the time of the invention to include an adhesive fixing the igniter of Bernau et al., as taught by Hill, in order to provide a seal for the joint between the igniter and the cap.

14. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernau et al. (US 5,753,852) in view of Bornheim et al. (US 6,655,289 B1.) Bernau et al. is discussed above, and teaches all elements of the claimed invention, but does not disclose a bar code. Bornheim et al. teaches (col. 5, lines 38-45) that it is useful to include a bar code on an initiation device housing in order to have a convenient place for relevant data. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the housing of Bernau et al. to include a bar code, as taught by Bornheim et al. in order to have a convenient location for relevant data.

15. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernau et al. (US 5,753,852) in view of Schmucker et al. (US 5,525,306.) Bernau et al. is discussed above and fails to teach adhesively fixing the base to the cap. Schmucker et al. teaches providing additional adhesive to a rotationally fixed cap and base, used to provide an additional fix (see col. 3, line 55.) It would have been obvious to one having ordinary skill in the art at the time of the invention to provide adhesive to

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the rotational connection of Bernau et al., in view of the teaching of Schmucker et al., in order to provide a more gas tight and stable connection between the cap and the base.

16. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernau et al. (US 5,753,852) in view of Halford et al. (US 5,454,587.) Bernau et al. is discussed above and fails to teach tapered grooves formed by the inner wall of the hook which can be used to form an interference fit between the hooks and protruding portions. Halford et al. teaches tapered grooves (16,17) in the hook walls of a rotary connection (see col. 3, line 53) which are used to tightly join the rotary connection. It would have been obvious to one having ordinary skill in the art at the time of the invention in view of the teaching of Halford et al. to include a tapered groove formed by one of the inner walls of the hook of Bernau et al. in order to provide a tight connection.

Allowable Subject Matter

17. Claims 4-6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

18. Applicant's arguments filed 6/18/04 have been fully considered but they are not persuasive. Schmucker et al. does include an interference fit, for the reasons noted above and reiterated here : Schmucker et al. disclosed an interference fit in a number of locations. First of all, the claim doesn't recite any limitations of the interference fit other than that it is formed by rotatably fixing the base against the cap. In Schmucker et al., there is an interference fit between the upper end of the base 4, (as oriented in the

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Figure) and seal 20 (col.2, lines 47-52.) This is sufficient to meet the limitation.

Secondly, Schmucker discloses that the threads may be self-cutting (col. 2, lines 54-56.) In order for the threads to be self-cutting there must inherently be an interference fit between the crest of one thread and the mating element, so that the crest cuts into the mating element. Thirdly, Schmucker discloses (col. 2, line 5-54) that the threads may firmly interlock (non-detachable thread connection) which would inherently require or include an interference fit between the threads.

19. Regarding Bernau, claim 2 does not require the interference fit to be between the cap and base, but merely requires that one be formed. Because the seal is deformed, it forms an interference fit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 571-272-6673.

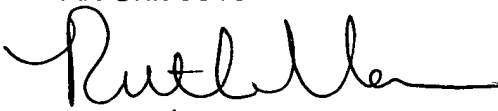
The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth Ilan
Primary Examiner
Art Unit 3616


9/1/05
